## Abstract

As requested by the Examiner, a new abstract has been submitted on a separate sheet.  Please substitute the abstract in the application with the abstract on the following page.

# Abstract

A method for inferring the shape and dimension of arrays for high-level, array-based languages
such as MATLAB is presented.  The method uses the algebraic properties that underlie
MATLAB's shape semantics and infers the shape that the program expression assumes.  In one
embodiment, a shape-tuple of the result of a program expression is inferred by creating a shape-
tuple expression comprising the shape-tuples of the operands and the shape-tuple operator.